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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,366	02/28/2002	Vincent P. Dattilo	1552D1	8445

7590 08/15/2005

PPG Industries, Inc.  
One PPG Place  
Pittsburgh, PA 15272

EXAMINER
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KIM, CHRISTOPHER S

ART UNIT	PAPER NUMBER
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3752

DATE MAILED: 08/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/085,366	DATTILO, VINCENT P. <span style="float: right;">C</span>	
	Examiner	Art Unit	
	Christopher S. Kim	3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 February 2005.
- 2a) ☒ This action is FINAL.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 22-24 and 28-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22-24 and 28-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/6/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The response filed February 6, 2004 is acknowledged.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 23, 24, 29, 30, 34, 35, 38, 39, 42 and 43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 23 recites "...control ratio is defined as rotation speed multiplied by shaping air supply divided by coating flow rate..." It is uncertain what characteristic/parameter of "shaping air supply" is multiplied by the rotation speed. Claims 29, 30 and 34 contain similar recitations.

### ***Claim Rejections - 35 USC § 102***

4. Claim 22 is rejected under 35 U.S.C. 102(b) as being anticipated by Tada et al. (4,148,932).

Tada et al. discloses a method comprising: controlling bell cup rotational speed (see figures 1 and 2), shaping air volume (air volume in cylinder 14) and coating delivery rate (through supply pipe 21); and droplet size (several tens of microns, column 4, lines 23-33).

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5. Claims 28, 31, 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Drum (3,512,502).

Drum discloses a method comprising: defining a control ratio of atomization energy to coating flow rate (e.g. voltage to flow rate); and controlling multiple applicators 12.

***Claim Rejections - 35 USC § 103***

6. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Drum (3,512,502) in view of Tada et al. (4,148,932).

Drum discloses the limitations of the claimed invention with the exception of the droplet size. Tada et al. discloses droplet size (several tens of microns, column 4, lines 23-33). It would have been obvious to a person having ordinary skill in the art at the time of the invention to have provided the spray head of Tada et al. to the device of Drum to provide high quality coating (Tada et al., column 1, lines 50-62).

7. Claims 36, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tada et al. (4,148,932).

Tada et al. discloses the limitations of the claimed invention with the exception of the plurality of waterborne coating components. Applicant discloses, as prior art, coating materials having waterborne coating components. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have used the device of Tada to spray existing coating materials to reduce bubbling.

The coating material is inherently dynamically mixed when supplied to the device of Tada.

8. Claims 40, 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drum (3,512,502).

Drum discloses the limitations of the claimed invention with the exception of the plurality of waterborne coating components. Applicant discloses, as prior art, coating materials having waterborne coating components. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have used the device of Drum to spray existing coating materials to reduce bubbling.

The coating material is inherently dynamically mixed when supplied to the device of Drum.

### ***Response to Arguments***

9. Applicant's arguments filed February 6, 2004 have been fully considered but they are not persuasive.

Applicant argues that Tada does not teach controlling bell cup rotational speed, shaping air volume, and coating flow rate to obtain a particular droplet size distribution. Tada discloses, in column 4, lines 23-26, controlling cup rotation speed from 4,000 to 16,000 rpm. Tada discloses shaping air volume (air volume is bell 20). Tada discloses coating flow rate through supply pipe 21. Finally, Tada's paint thickness over the device is several tens of microns but does not exceed 100 microns. The several tens of microns inherently translates to a size of the droplets. The droplets too will have a

thickness as the same as the thickness of the paint on the bell when it initially leaves the bell during spraying. It is noted that applicant's claimed invention refers to "droplet size" but does not define the parameter of the droplet, i.e. diameter, volume, radius, circumference, etc.

Applicant argues that Tada's figure 9 shows droplets sizes of 100 microns. Figure 9 shows one example of Tada's invention using the operating parameters in column 8, lines 64-68. Tada's invention is not limited to operating at those parameters.

Applicant argues that Drum does not teach a control ratio of atomization energy to coating flow rate. Drum shows three similar atomizers 12. Each has the same atomization energy and the same coating flow rate. Therefore, each inherently has the same control ratio of atomization energy to coating flow rate.

### ***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

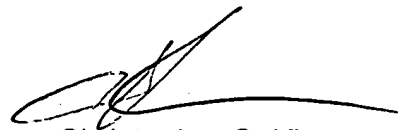
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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (571) 272-4905. The examiner can normally be reached on Monday - Thursday, 6:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel can be reached on (571) 272-4919. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-3750.

A handwritten signature in black ink, appearing to be 'CSK', with a long horizontal flourish extending to the right.

Christopher S. Kim  
Primary Examiner  
Art Unit 3752

CK